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EXAMINER

JOO, JOSHUA

ART UNIT PAPER NUMBER

2154

DATE MAILED: 06/20/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/032,970

Applicant(s)

CONRAD ET AL.

Examiner

Joshua Joo

Art Unit

2154

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 May 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8, 11-16, 19-25, 28 and 29 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8, 11-16, 19-25, 28 and 29 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

20

1. Claims 1-8, 11-16, 19-25, and 28-29 are presented for examination.

Claim Objections

2. Claim 13 is objected to because of the following informalities: Claim 13 has a minor grammatical mistake, where "receive a information" should be "receive information".

Appropriate correction is required.

Claim Rejections - 35 USC § 112

3. Claims 1, 13, and 21 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Claims 1, 13, and 21 were amended by Applicant to "provide an indication if said data 'is less than' said predetermined value", where "less than" was changed from "exceed". There is no description in the specification of the instant application that indicates providing an indication if the data is less than the predetermined or preselected value. In the specification, page 8, lines 4-6, it states "if the operational parameter exceed the preselected specifications" and on page 22, lines 29-30, it states "should a value of a connector parameter exceeds a preselected value".

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

Art Unit: 2154

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-8, 11-16, 19-25, 28-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ahearn et al, US Patent #5,926,463 (Ahearn hereinafter) in view of Chiussi et al, US Patent #5,905,711 (Chiussi hereinafter).

6. As per claims 1 and 21, Ahern teaches substantially the invention as claimed including the method and apparatus for viewing and managing the configuration of a computer network: Ahern's teachings comprise of:

receiving information corresponding to the start node and the end node (Col 6, lines 29-

30. A workstation desires to communicate with a server.);

receiving information corresponding to a type of path of interest (Col 7, line 67-Col 8, line

6. User can select "Shortest Path.");

receiving information corresponding to a type of connector of interest (Col 6, lines 63-66;

Col 7, lines 66-67. Receives information from corresponding switch, router, or server.);

determining a path between the start node and the end node based upon the type of path of interest and the type of connector of interest (Col 6, lines 29-33; Col 7, lines 9-40.

Network supervisor analyzes a path for the workstation and the connectors involved in the path.);

identifying at least one connector in said path (Col 6, lines 47-51. Network supervisor identifies servers, routers, and switches in the path.), said at least one connector having a data storage device associated therewith (Col 24, lines 14-25. Switches and routers have database for storing information.);

receiving data representative of an operating parameter from said at least one connector (Col 6, lines 51-52. Network supervisor obtains information from the devices.);

comparing said data to a predetermined value (Col 6, lines 51-54. Network supervisor analyzes information for difficulties in the communications path.).

7. Ahearn teaches of receiving information from network devices to analyze for difficulties in the communication path (Col 6, lines 51-54).

8. However, Ahern does not teach of receiving data representative of available data storage space from said at least one connector and providing an indication if said data is less than said predetermined value.

9. Chiussi teaches of monitoring the available memory of a communications switch (Col 2, lines 31-34; Col 10, lines 35-37) and receiving a congestion indicator, which indicates it is less than the threshold, to make network changes (Col 5, lines 28-33).

10. It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Ahearn and Chiussi because both teachings deal with controlling devices on a communications network. Ahearn's teaches of receiving information and analyzing the information for network difficulties, so it would be desirable to compare the received information with predetermined values to determine if the network devices are operating according to acceptable levels. Furthermore, the teachings of Chiussi to provide data regarding the memory availability and to provide an indication if the data is less than a predetermined value would improve the efficiency of Ahearn's teachings by allowing the supervisor to configure the network according to the network devices' memory, allowing for the control of the data transfer rate.

11. As per claim 13, Ahern teaches substantially the invention as claimed including the method and apparatus for viewing and managing the configuration of a computer network:

Ahern's teachings comprise of:

a processor (Inherent);

a discovery mechanism associated with said processor, said discovery mechanism configured to generate and store topology data specifying connectors and segments of a network, said discovery mechanism being configured to determine a path between a start node and an end node based upon said topology data (Col 7, lines 12-17. Network supervisor can analyze the topology of the network, including the workstations and routers. Col 6, lines 3-22; Fig. 8. Network supervisor can obtain information regarding the network and its connections, and determine a suitable path.); and

a connector evaluation mechanism associated with said processor said connector evaluation mechanism configured to:

receive information a parameter value from a connector in said path (Col 6, lines 51-52. Network supervisor obtains information from the devices.);

comparing said parameter value to a predetermined value (Col 6, lines 51-54. Network supervisor analyzes information for difficulties in the communications path.); and

12. Ahearn does not teach of receiving information relating to the available space on said data storage device from a connector, comparing said available data space to a predetermined value, and generating an event if said available data space is less than said preselected value.

13. Chiussi teaches of monitoring the available memory of a communications switch (Col 2, lines 31-34; Col 10, lines 35-37), comparing congestion indicators to thresholds (Col 10, lines

Art Unit: 2154

48-52), and receiving a congestion indicator, which indicates it is less than the threshold, to make network changes (Col 5, lines 28-33).

14. It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Ahearn and Chiussi because both teachings deal with controlling devices on a communications network. Ahearn's teaches of receiving information and analyzing the information for network difficulties, so it would be desirable to compare the received information with predetermined values to determine if the network devices are operating according to acceptable levels. Furthermore, the teachings of Chiussi to provide data regarding the memory availability and to provide an indication if the data is less than a predetermined value would improve the efficiency of Ahearn's teachings by allowing the operator to configure network according to the network devices' memory, allowing for control of the data transfer rate.

15. As per claims 2 and 22, Ahearn teaches the invention, wherein receiving information corresponding to a type of path of interest comprises receiving information corresponding to at least one of: all paths between the start node and the end node, and a shortest path between the start node and the end node (Col 7, line 66-Col 8, lines 6. User is able to view the Open Shortest Path First Area Topology.).

16. As per claims 3 and 23, Ahearn teaches the invention, wherein said at least one path comprises at least one sub-network, wherein each of the sub-networks has at least one level 2 connector and at least one level 3 connector, each of the sub-networks being configured to intercommunicate with another of the sub-networks via a level 3 connector, and wherein receiving information corresponding to a type of connector of interest comprises receiving

Art Unit: 2154

information corresponding to at least one of: level 2 and level 3 connectors, and level 3 connectors (Col 7, lines 63-67. User can view the layer 3 elements e.g. routers. Col 13, lines 40-47. Shows layer 2. Col 5, lines 39-56; Col 6, lines 9-14; Col 13, lines 40-46; Fig. 8. User can view layer 2 and layer 3 elements.).

17. As per claims 4 and 24, Ahearn teaches the invention of claim 3, wherein when the type of connectors of interest are level 3 connectors and wherein said determining a path between the start node and the end node comprises: identifying sub-networks associated with the start node; and determining whether the end nodes is associated with at least one of the identified sub-networks (Col 12, lines 14-44. System performs a ping spray to identify all nodes and all nodes on each respective subnet in order to learn new routers and associated networks.).

18. As per claims 5 and 25, Ahearn teaches the invention, wherein said at least one path comprises at least one segment and wherein the type of connectors of interest are level 2 and level 3 connectors, determining a path between the start node and the end node comprises: Identifying segments associated with the start node; and determining whether the end node is associated with at least one of the identified segments. (Col 12, lines 14-44. System performs a ping spray to identify all nodes and all nodes on each respective subnet in order to learn new routers and associated networks. Col 13, lines 40-58. System performs a ping test to identify the layer 2 topology.).

19. As per claim 6, Ahearn teaches the method of claim 4, further comprising: recursively identifying sub-networks associated with the each of the previously identified sub-networks if the end node is not associated with at least of the identified sub-networks; and determining whether

Art Unit: 2154

the end node is associated with at least one of the sub-networks associated with the each of the previously identified sub-networks (Col 12, lines 14-44. System periodically performs a ping spray to learn new routers and their associated networks.).

20. As per claim 7, Ahearn teaches the method of claim 5, further comprising: Recursively identifying segments associated with the each of the previously identified segments if the end node is not associated with at least one of the identified segments; and determining whether the end node is associated with at least one of the segments associated with the each of the previously identified segments (Col 14, line 14 – Col 15, line 19. System performs a trace route to identify nodes connected to each segment.).

21. As per claim 8, Ahearn teaches the method of claim 2, wherein determining a path between the start node and the end node comprises: storing a shortest path between the start node and the end node in memory as a current shortest path; and if the type of path of interest is the shortest path between the start node and the end node, recursively determining paths between the start node and the end node based upon the type of connector of interest such that, when a newly determined path between the start node and the end node is shorter than the current shortest path, the current shortest path is replaced with the newly determined path (Col 7, line 67-Col 8, line 6. User can select the OSPF. Col 7, lines 25-32. System can be configured and updated. Col 12, lines 20-21. System can update topology information when new routers and networks are learned.).

22. As per claims 11, 19, and 28, Ahearn teaches, wherein said at least one connector monitors itself and records information detected by said monitoring, and wherein said operating

Art Unit: 2154

parameters is related to the information recorded by said at least one connector (Col 6, lines 47-53; Col 6, lines 34-36; Col 8, lines 1-5. Network supervisor can obtain information from the network devices including the status of the devices.).

23. However, Ahearn does not teach of said at least one connector recording available space on said data storage device by said monitoring.

24. Chiussi teaches of monitoring available memory (Col 10, lines 35-37) to affect changes in the data transfer (Col 5, lines 28-34).

25. It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Ahearn and Chiussi to store available memory along with the other status information of the network devices because storing the available memory would improve the quality of service of Ahearn's teachings by allowing a supervisor to obtain information from the network devices to analyze the devices. Information including available memory may be used to control data rates for an efficient network.

26. As per claims 12, 20, and 29, Ahearn teaches the invention, wherein said least one connector has a management information base associated therewith and wherein said operating parameter is data stored in said management information base (Col 7, line 66 – Col 8, line 10. Router has baseline information, routing and integrity check status information, and MIB objects.)

27. However, Ahearn does not teach the method, wherein said available storage on said data storage device is data stored in said management information base.

28. Chiussi teaches of monitoring available memory (Col 10, lines 35-37).

29. It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Ahearn and Chiussi to store available storage because storing the available memory would improve the quality of service of Ahearn's teachings by allowing the supervisor to obtain information from the network devices to analyze for difficulties in the network, and information including available memory may be used to control data rates for an efficient network.

30. As per claim 14, Ahearn teaches the system of claim 13, wherein said discovery mechanism has a probable path mechanism configured to determine a path between the start node and the end node based upon said topology data (Col 7, line 66-Col 8, line 8. User can modify properties of routers. Col 6, lines 23-54. User can determine the path from the workstation to the server.).

31. As per claim 15, Ahearn teaches the system of claim 13, wherein said discovery mechanism has means for determining a path between the start node and the end node based upon said topology data (Col 7, line 66-Col 8, line 8. User can modify properties of routers. Col 6, lines 23-54. User can determine the path from the workstation to the server.).

32. As per claim 16, Ahearn teaches the system of claim 14, wherein said probable path mechanism is configured to receive information corresponding to a type of path of interest, receive information corresponding to a type of connector of interest, and determine a path between the start node and the end node based upon said type of path of interest and said type of connector of interest (Col 7, line 66-Col 8, lines 11. User can configure routers and determine a path of interest.).

Conclusion

33. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

34. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joshua Joo whose telephone number is 571 272-3966. The examiner can normally be reached on Monday to Friday 7 to 4.

35. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John A. Follansbee can be reached on 571 272-3964. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

36. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

Art Unit: 2154

applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

June 9, 2005

JJ


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